RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:

Source:

Date Processed by STIC:

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IFWO

RAW SEQUENCE LISTING DATE: 03/06/2007
PATENT APPLICATION: US/10/579,879A TIME: 11:32:00

Input Set : N:\efs\03_06_07 \10579879A_efs\Replacement_Sequence_Listing.txt

Output Set: N:\CRF4\03062007\J579879A.raw

```
3 <110> APPLICANT: The Government of the United States of America, as
             represented by the Secretary of the Department of Health and
             Human Services
     6
             Flomerfelt, Francis
             Gress, Ronald
     9 <120> TITLE OF INVENTION: SPATIAL FOR ALTERING CELL PROLIFERATION
     11 <130> FILE REFERENCE: 4239-64851-02
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/579,879A
    14 <141> CURRENT FILING DATE: 2006-05-17
    16 <150> PRIOR APPLICATION NUMBER: PCT/US2003/036874
    17 <151> PRIOR FILING DATE: 2003-11-18
    19 <160> NUMBER OF SEQ ID NOS: 7
    21 <170> SOFTWARE: PatentIn version 3.3
    23 <210> SEQ ID NO: 1
    24 <211> LENGTH: 933
    25 <212> TYPE: DNA
    26 <213> ORGANISM: Mus musculus
    29 <220> FEATURE:
    30 <221> NAME/KEY: CDS
    31 <222> LOCATION: (84)..(677)
    32 <223> OTHER INFORMATION: Coding sequence
    34 <400> SEQUENCE: 1
    37 gaaacttgtg ttggaaccag ccc ctg ttt ctg ggg aat gta tat aag ggg agt
                                                                           113
    38
                                 Leu Phe Leu Gly Asn Val Tyr Lys Gly Ser
    39
    41 tta gca cct cgt agg gat gag gtg act agt cca aag gca gag ccc cag
                                                                           161
    42 Leu Ala Pro Arg Arg Asp Glu Val Thr Ser Pro Lys Ala Glu Pro Gln
                       15
    45 cca gag acg aag ccg gag aac ctt cca agg agc cac ggg gat gtt ggg
                                                                           209
    46 Pro Glu Thr Lys Pro Glu Asn Leu Pro Arg Ser His Gly Asp Val Gly
                   3.0
                                       35
    49 ctc cag aaa gag act gtg gtc cca ggc att gtg gat ttc gag ctg atc
                                                                           257
    50 Leu Gln Lys Glu Thr Val Val Pro Gly Ile Val Asp Phe Glu Leu Ile
    51
               45
                                   50
    53 cat gag gag ctg aag acc aca aag ccc caa aca tca caa cca aca ccc
                                                                           305
    54 His Glu Glu Leu Lys Thr Thr Lys Pro Gln Thr Ser Gln Pro Thr Pro
                               65
    57 agt gcc tac cgc ttt gga cgc cta agc cac cat tcc ttc ttc tcg agg
                                                                           353
    58 Ser Ala Tyr Arg Phe Gly Arg Leu Ser His His Ser Phe Phe Ser Arg
                           80
    61 cac cac ccc caa cca cag cga gtg act cat atc caa gat atc gct ggg
                                                                           401
    62 His His Pro Gln Pro Gln Arq Val Thr His Ile Gln Asp Ile Ala Gly
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Input Set : N:\efs\03_06_07 \10579879A_efs\Replacement_Sequence_Listing.txt Output Set: N:\CRF4\03062007\J579879A.raw

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										gag								449
		Lys	Pro		_	Val	Val	Arg	Asp	Glu	Phe	Ser	Leu	Ser		Leu	Thr	
	67				110					115					120			
										ctg								497
	70	Gln	Pro	Thr	Phe	Leu	Ser	Arg	_	Leu	Met	Gly	Met.	Pro	Thr	Ile	Ser	
	71			125					130					135				
										aat								545
	74	Val	Pro	Ile	Gly .	Asp	Pro	Gln	Ser	Asn	Arg	Asn	Pro	Gln	Leu	Ser	Thr	
	75		140					145					150					
										aag								593
	78	Ser	Asp	Thr	Trp .	Arg	Lys	Lys	Leu	Lys	Asp	Leu	Ala	Ser	Arg	Val	Thr	
	79	155					160					165					170	
										aag								641
	82 '	Val	Phe	Thr	Lys	Glu	Ile	Gln	Pro	Lys	Pro	Asp	Glu	Val	Gly	Val	Ala	
	83					175					180					185		
	85	caa	aga	atg	gag	cct	aga	aaa	aaa	agg	cct	tct	taa	gtct	ccc	caa		687
	86	Gln	Arg	Met	Glu	Pro	Arg	Lys	Lys	Arg	Pro	Ser						
	87				190					195								_
	89	tgct	cago	tg c	tggc	acgg	g ag	ggga	agga	a ccc	tcat	aac	ctcg	gaagg	itg a	acago	gaaaa	747
	91	tcaa	agaa	ac a	caaa	atca	c ac	ctac	gcaga	a gaa	atco	aag	aagg	gtto	CC a	agaaa	acaccc	807
	93	tcta	aagc	aa c	tgtt	ccca	a co	tgtc	taat	gcc	ttga	CCC	ttga	atac	ag t	ttct	cacac	867
	95	tgca	ıgtaa	.cc c	ctgc	cccc	g aa	ıataa	aatt	att	ttca	itta	ctac	ttca	aa a	aaaaa	aaaaaa	
	97	aaaa	aa															933
	100	<21	.0> S	EQ I	D NO	: 2												
				ENGT														
				YPE:				_										
				RGAN			mus	culu	ıs									
				EQUE							_	_		_	_	_	_	
			Phe	Leu	Gly	Asn	Val	Tyr	Lys	s Gly		Leu	. Ala	Pro	Arg		g Asp	
	108					5					10	_			_	15		
			ı Val	Thr		Pro	Lys	Ala	i GI		Gin	Pro	GIU	Thr	_	s Pro	o Glu	
	112		_	_	20	_	•		_	25	,	_		_	30	,		
			Leu		Arg	Ser	His	GLy		val	GLY	Leu	GIT		GI	ı Tnı	· Val	
	116		_	35			_		40	_		'		45	_	_	_,	
				Gly	Ile	Val	Așr		e GI	ı Leu	Ile	His		GIU	Let	ı Lys	5 Thr	
	120		50	_			_	55	_		_	_	60	_	_	٠,	~7	
			Lys	Pro	Gln	Thr		GIr	Pro	Thr	Pro		. ATa	Tyr	Arg	g Phe	Gly	
	124		_	_	•	•	70			_	_	75	1	_		_	80	
		_	Leu	Ser	His		Ser	Phe	Phe	Ser	_	His	His	Pro	Gli		Gln	
	128					85				_ =	90	_	_	-	_	95		
•			Val	Thr			Glr	Asp) Ile		_	Lys	Pro	Val			l Val	
	132				100					105		_		_	110			
		_	Asp			Ser	Leu	Ser			Thr	Gln	Pro			e Lei	ı Ser	
	136			115					120					125				
										- Tl -			D					
	139	_	_		Met	Gly	Met			. iie	ser	vai			: GI3	/ As	Pro	
	139 140	_	130			_		135	;				140)				
	139 140 143	_	130 Ser			_		135 Gln	;				140 Asp)			Pro Lys	

DATE: 03/06/2007 RAW SEQUENCE LISTING PATENT APPLICATION: US/10/579,879A TIME: 11:32:00

Input Set : N:\efs\03_06_07 \10579879A_efs\Replacement_Sequence_Listing.txt
Output Set: N:\CRF4\03062007\J579879A.raw

	Lys	Leu	Lys	Asp		Ala	Ser	Arg	Val		Val	Phe	Thr	Lys		Ile	
148		_	_	_	165	~7		~7		170	~1		30.1	~ 1	175	-	
	Gln	Pro	Lys		Asp	GIu	Val	Gly		Ala	GIn	Arg	Met		Pro	Arg	
152		_	_	180	_				185					190			
	Lys	Lys	_	Pro	Ser												
156			195		_												
)> SI															
		L> LI			035												
		2> T					_										
					Mus	mus	culus	3									
)> FI															
		L> N2															
		2> L(-											
						rion	: Cod	ling	seq	lence	3						
)> SI					4										
			-	_												tgggga	60
	gaaa	actto	gtg t	tgga	aacca	ag co		_								gg agt	113
174							Le	eu Pl	ne Le	eu Gl	ly As	sn Va	al Ty	yr Ly	ys G.	ly Ser	
175							1				5				•	10	
								gtg									161
178	Leu	Ala	Pro	Arg	Arg	Asp	Glu	Val	Thr	Ser	Pro	Lys	Ala	Glu		Gln	
179					15					20					25		
								ctt									209
182	Pro	Glu	Thr	Lys	Pro	Glu	Asn	Leu	Pro	Arg	Ser	His	Gly	Asp	Val	Gly	
183				30					35					40			
								cca									257
186	Leu	Gln	Lys	Glu	Thr	Val	Val	Pro	Gly	Ile	Val	Asp		Glu	Leu	Ile	
187			45					50					55				
								aag									305
190	His	Glu	Glu	Leu	Lys	Thr	Thr	Lys	Pro	Gln.	Thr	Ser	Gln	Pro	Thr	Pro	
191		60					65					70					
								cta									353
194	Ser	Ala	Tyr	Arg	Phe	Gly	Arg	Leu	Ser	His	His	Ser	Phe	Phe	Ser		
195	75					80					85					90	
						_	_	gtg					_				401
198	His	His	Pro	Gln	Pro	Gln	Arg	Val	Thr	His	Ile	Gln	Val	Thr	Gly	Arg	
199					95					100					105		
								CCC									449
202	Glu	Asp	Leu	Glu	His	Ser	Leu	Pro	Leu	Thr	Thr	Ser	Phe		Leu	Leu	
203				110					115					120			
205	caa	gct	cct	ggg	gtc	cag	ccc	atg	gat	ctc	act	ccc	tct	gca	gat	atc	497
206	${\tt Gln}$	Ala	Pro	Gly	Val	Gln	Pro	Met	Asp	Leu	Thr	Pro	Ser	Ala	Asp	Ile	
207			125					130					135				
209	gct	ggg	aag	cct	gtc	tgc	gtg	gtc	agg	gac	gag	ttc	tct	ctg	tcg	gcc	545
								Val									
211		140	-				145		_	_		150					
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215						160				-	165		-			170	

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Input Set : N:\efs\03_06_07 \10579879A_efs\Replacement_Sequence_Listing.txt
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				-													
217	atc	tct	gtc	ccc	att	ggg	gat	cca	cag	tcc	aat	cgg	aac	ccc	cag	ctt	641
218	Ile	Ser	Val	Pro	Ile	Gly	Asp	Pro	Gln	Ser	Asn	Arg	Asn	Pro	Gln	Leu	
219					175					180					185		
221	tct	act	tct	gac	acc	tgg	agg	aag	aaa	ctg	aag	gac	ctg	gct	tcc	cga	689
222	Ser	Thr	Ser	Asp	Thr	Trp	Arg	Lys	Lys	Leu	Lys	Asp	Leu	Ala	Ser	Arg	
223				190				٠.	195					200			
225	gtg	act	gtc	ttc	act	aag	gaa	atc	cag	cca	aag	CCC	gat	gag	gtt	ggt	73 7
226	Val	Thr	Val	Phe	Thr	Lys	Glu	Ile	Gln	Pro	Lys	Pro	Asp	Glu	Val	Gly	
227			205					210					215				
	gtt	_		_	_			_						taa			779
230	Val	Ala	Gln	Arg	Met	Glu		Arg	Lys	Lys	Arg		Ser				
231		220					225					230					
	_			_	-	-										aaggtg	839
	-				_											gttccc	899
	_				_		_			-		_	_		_	atacag	959
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	<210		_														
	<21				31												
	<212						,										
	<213					mus	culu	S									
	<400					**- 7		T	~1	0		77.	D	3	7	3	
		Pne	Leu	GIY		vai	Tyr	ьys	GIY		ьeu	Ala	Pro	Arg	Arg	Asp	
252		7707	mb	Com	5 Dmo	T	777	~ 3	Dwo	10	Dwo	C1	mb ~	Tira	15	C1.,	
255 256	GIU	vai	IIIL	20	PIO	гуѕ	Ala	Gru	25	GIII	PIO	GIU	IIIL	цуs	Pro	GIU	
	λαn	T 011	Dro		Sor	шic	Clar	λαη		Clar	Len	Gln	Lare		Thr	Wal	
260	ASII	пеи	35	Arg	Ser	nrs	GIY	40	vaı	Gry	пеп	GIII	ду 5 45	GIU	1111	Val	
	Wal	Dro		Tlo	Val	Δen	Dhe		T.e.11	Tle	Hic	Glu		T.e.11	Lys	Thr	
264		50	Gry	110	Val	nop	55	Olu	шси	110	1110	60	Olu	пси	Lyb		
			Pro	Gln	Thr	Ser		Pro	Thr	Pro	Ser		Tvr	Ara	Phe	Glv	,
268		-1-				70					75		-1-	5		80	
		Leu	Ser	His	His		Phe	Phe	Ser	Ara		His	Pro	Gln	Pro		
272					85					90					95		
		Val	Thr	His	Ile	Gln	Val	Thr	Gly	Arq	Glu	Asp	Leu	Glu	His	Ser	
276	,			100					105	_		-		110			
	Leu	Pro	Leu	Thr	Thr	Ser	Phe	Gln	Leu	Leu	Gln	Ala	Pro	Gly	Val	Gln	
280			115					120					125	-			
283	Pro	Met	Asp	Leu	Thr	Pro	Ser	Ala	Asp	Ile	Ala	Gly	Lys	Pro	Val	Cys	
284		130	_				135		_			140	_				
287	Val	Val	Àrg	Asp	Glu	Phe	Ser	Leu	Ser	Ala	Leu	Thr	Gln	Pro	Thr	Phe	
288	145					150					155					160	
291	Leu	Ser	Arg	Cys	Leu	Met	Gly	Met	Pro	Thr	Ile	Ser	Val	Pro	Ile	Gly	
292					165					170					175		
295	Asp	Pro	Gln	Ser	Asn	Arg	Asn	Pro	Gln	Leu	Ser	Thr	Ser	Asp	Thr	Trp	
296				180					185					190			
299	Arg	Lys	Lys	Leu	Lys	Asp	Leu	Ala	Ser	Arg	Val	Thr	Val	Phe	Thr	Lys	
300			195					200					205				
303	Glu	Ile	Gln	Pro	Lys	Pro	Asp	Glu	Val	Gly	Val	Ala	Gln	Arg	Met	Glu	

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                                                      220
     307 Pro Arg Lys Lys Arg Pro Ser
     308 225
     311 <210> SEQ ID NO: 5
     312 <211> LENGTH: 2117
     313 <212> TYPE: DNA
     314 <213> ORGANISM: Mus musculus
     317 <220> FEATURE:
     318 <221> NAME/KEY: CDS
     319 <222> LOCATION: (40)..(1365)
     321 <220> FEATURE:
     322 <221> NAME/KEY: variation
     323 <222> LOCATION: (336)..(336)
     324 <223> OTHER INFORMATION: results in encoded 'Xaa' at location 99 stands for Val.
     326 <220> FEATURE:
     327 <221> NAME/KEY: variation
     328 <222> LOCATION: (402)..(402)
     329 <223> OTHER INFORMATION: results in encoded 'Xaa' at location 121 stands for Val.
     331 <220> FEATURE:
     332 <221> NAME/KEY: variation
     333 <222> LOCATION: (420)..(420)
     334 <223> OTHER INFORMATION: results in encoded 'Xaa' at location 127 stands for Ile.
     336 <220> FEATURE:
     337 <221> NAME/KEY: variation
     338 <222> LOCATION: (705)..(705)
     339 <223> OTHER INFORMATION: results in encoded 'Xaa' at location 222 stands for Pro.
     341 <400> SEQUENCE: 5
     342 aagaaaagaa ggagaataga ggagctgctg gctgagaaa atg gct gtt gat ggt
                                                                                54
                                                    Met Ala Val Asp Gly
     343
     344
                                                                               102
     346 ggg tgt ggg gac act gga gac tgg gaa ggt cgc tgg aac cat gta aag
     347 Gly Cys Gly Asp Thr Gly Asp Trp Glu Gly Arg Trp Asn His Val Lys
     348
     350 aag ttc ctc gag cgg tct gga ccc ttc aca cac ccc gat ttc gaa cca
                                                                               150
     351 Lys Phe Leu Glu Arg Ser Gly Pro Phe Thr His Pro Asp Phe Glu Pro
                                                                               198
     354 agc act gaa tca ctc cag ttc ttg tta gat aca tgt aaa gtt cta gtc
     355 Ser Thr Glu Ser Leu Gln Phe Leu Leu Asp Thr Cys Lys Val Leu Val
                 40
     358 att gga gct ggt ggc tta gga tgt gag ctt ctg aaa aat ctg gca tta
                                                                               246
     359 Ile Gly Ala Gly Gly Leu Gly Cys Glu Leu Leu Lys Asn Leu Ala Leu
                                 60
     362 tot ggt ttt aga cag att cat gtt ata gac atg gac act ata gat gtt
                                                                               294
     363 Ser Gly Phe Arg Gln Ile His Val Ile Asp Met Asp Thr Ile Asp Val
     366 tcc aat tta aat aga cag ttt tta ttt agg cct aaa gat gty gga aga
                                                                               342
W--> 367 Ser Asn Leu Asn Arg Gln Phe Leu Phe Arg Pro Lys Asp Xaa Gly Arg
                         90
                                             95
                                                                               390
     370 ccc aaq qct qaa gtt gct gca gaa ttc cta aat gac aga gtt cct aac
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RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/10/579,879A

DATE: 03/06/2007 TIME: 11:32:01

Input Set : N:\efs\03_06_07 \10579879A_efs\Replacement_Sequence_Listing.txt

Output Set: N:\CRF4\03062007\J579879A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 99,121,127,222

Seq#:6; Xaa Pos. 99,121,127,222

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/579,879A

DATE: 03/06/2007 TIME: 11:32:01

Input Set : N:\efs\03_06_07

\10579879A_efs\Replacement_Sequence_Listing.txt

Output Set: N:\CRF4\03062007\J579879A.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application Number

L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:342

M:341 Repeated in SeqNo=5

L:534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:96

M:341 Repeated in SeqNo=6